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AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions:

1. (Currently Amended) An apparatus comprising:

a processor having a first planar surface and a second planar surface opposite to said first planar surface, said second planar surface comprising a plurality of bonding locations to bond to a printed circuit board;

a plurality of laser drivers in the processor, each of said plurality of laser drivers to generate an electrical data signal at a corresponding one of a plurality of output ports distributed on ~~a surface~~ the first planar surface of the processor;

a laser unit having a third planar surface coupled to the first planar surface of the processor, said third planar surface of the laser unit having a plurality of input ports, each of the plurality of input ports bonded to one of the output ports distributed on the first planar surface of the processor ~~package~~, said laser unit including at least one pulse laser to generate at least one pulse train; and

said laser unit including a plurality of laser modulators, each of said plurality of laser modulators to receive a particular pulse train from the at least one pulse laser, and a particular electrical data signal from a corresponding one of the plurality of laser drivers, each of said plurality of laser modulators to encode its received electrical data signal onto its received pulse train by selectively passing pulses.

2. (Previously Presented) The apparatus of claim 1 wherein the at least one pulse laser is mode-locked to a particular pulse frequency equal to a data rate of at least one of the electrical data signals.

3. (Previously Presented) The apparatus of claim 1 wherein the at least one pulse laser comprises a plurality of pulse lasers, each of the plurality of pulse lasers to provide a separate pulse train to a corresponding one of the plurality of laser modulators.

4. (Cancelled)

5. (Previously Presented) The apparatus of claim 1 wherein each of the plurality of laser modulators comprises one of a Mach-Zhender interferometer or a variable optical attenuator.

6. (Previously Presented) The apparatus of claim 1 further comprising:
a plurality of light conductors to direct the at least one pulse train from the at least one pulse laser to the plurality of laser modulators.

7. (Previously Presented) The apparatus of claim 6 wherein each of the plurality of light conductors comprises at least one of a waveguide or an optical fiber.

8. - 20. (Cancelled)

21. (Previously Presented) The apparatus of claim 1 wherein the at least one pulse laser comprises a single pulse laser, said laser unit further comprising a beam splitter to direct a single pulse train from the single pulse laser to each of the plurality of laser modulators.